DEPARTMENT OF NATURAL RESOURCES
POSITION DESCRIPTION

Classification: Water Resources Management Specialist – Advanced
Working Title: Water Quality Monitoring and Assessment Technical Leader – Wetlands
Location: Bureau of Water Quality; Monitoring Section, Central Office

Purpose of the Position: This is a high-level monitoring scientist position responsible for planning and assuring implementation of WDNR's water quality monitoring and assessment of wetland biological condition and function utilizing EPA's Level 1,2,3 framework (Clean Water Act implementation monitoring). The position provides key leadership for statewide problem-solving for wetlands monitoring-related issues, including the foundation for and integration of science-based natural resource management and policy with internal and external partner programs engaged in wetland conservation activities. This scientist will have lead responsibility for all phases of development and implementation of the wetlands monitoring and assessment program including statistically valid experimental designs, efficient and accurate field methodologies, high-level statistical analyses, high-quality program guidance and publications, as well as effective formal and informal communications and presentations within DNR, to partners, and to the public.

Geographic Scope and Travel Requirements: This position will work on wetland water quality monitoring and assessment issues that are generally statewide in geographic scope. Most often, office-related duties will be conducted at the Madison work location, but overnight statewide travel will be required to complete projects and to attend meetings with internal and external partners. Some out-of-state travel may be required to attend meetings and/or conferences as necessary.

Scope of Authority: This position reports to the Monitoring Section Chief, Bureau of Water Quality and interacts regularly with other members of the Water Quality Management Team (comprised of the Bureau Director, Field Operations Directors, Section Chiefs, and District Water Resources and Wastewater Supervisors).

TIME **GOALS AND WORKER ACTIVITIES**

55% **A.** **<u>Develop, implement, and coordinate water quality monitoring and assessment of wetlands</u>**

A1. Lead monitoring and assessment activities associated with wetlands for the water quality program.

A2. Conduct field work and provide training of field staff in carrying out wetland monitoring and assessment activities.

A3. Lead efforts to implement and periodically update the Water Resources monitoring strategy for wetland resources

A4. Interpret EPA monitoring guidance documents and maintain awareness of other states' programs.

A5. Conduct statistical analyses of water quality monitoring and assessment data collected on wetlands (including water quality, floristic quality, soils, and hydrology) to assess status and condition (probablistic-based assessments, targeted watershed projects), as well as evaluate long term trends and efficacy of wetland protection and restoration projects. Communicate novel research findings and program evaluations through peer-reviewed publications and professional conferences.

A6. Manage wetland monitoring fiscal resources including Wetland Program Development and Monitoring Initiative grants.

A7. Provide direction and coordination of LTE staff and contractors working on wetland mapping, monitoring and asessment projects.

A8. Work with partner agencies and orgranizations, the University System, and the Wisconsin State Laboratory of Hygeine to make sure priority research needs are understood and make recommendations related to these priorities.

25% **B.** **Support functions for wetlands monitoring and assessment**

B1. Lead and Coordinate the Wetlands Monitoring Technical Team.

B2. Assist with wetlands monitoring and assessment communications.

B3. Coordinate wetland monitoring workplanning at the field level and integrate with rivers, streams, and lake monitoring.

B4. Coordinate updates and/or conduct training for new or revised monitoring protocols.

B5. Coordinate and/or conduct training for experienced and/or new water quality biologists.

B6. Provide input on quality assurance project plans.

B7. Assist biologists with issues related to wetland monitoring and assessment as part of stream, lake, and watershed monitoring and assessment activities.

B8. Coordinate with Wisconsin Wetland Inventory (WWI) staff to incorporate wetland monitoring activities with ongoing updates of the WWI.

15% **C.** **Technical Support for use of wetland monitoring and assessment data**

C1. Provide monitoring data, summaries, analysis and/or develop tools for use by other WDNR programs such as: Wastewater, Runoff Management, Waterways and Wetlands, Water Use, Wildlife Management, Natural Heritage Conservation, Office of Great Waters, among others.

C2. Provide technical support and training to staff in the use of GIS layers related to wetland assessment, including support for advanced use of the "Wetlands and Watersheds Explorer" GIS Decision Support Tool

C2. Coordinate requests for wetland monitoring needs from WDNR cross-program partners and external partner agencies.

C3. Represent wetland monitoring on various standing or ad hoc teams such as; Surface Water Grants Team, Site Specific Criteria Workgroup; Watershed Assessment, Restoration, and Protection Team; Volunteer Stream Monitoring.

C4. Participate in the development of guidance that includes monitoring (WisCALM, Non-point implementation Guidance, TMDL Guidance, etc.)

C5. Participate in the development of wetland mapping protocols, review WWI output to ensure compatibility with wetland monitoring needs

5% **D.** **Other Duties as Assigned**

D1. Participate in job related training.

D2. Prepare forms and reports for personnel and budget accounting, as necessary.

D3. Other duties, as necessary.

Knowledge, Skills and Abilities:

1. Monitoring methodologies including application of the scientific method, experimental design, data collection techniques, statistical analysis of data and interpretation, and techniques for scientific writing and presenting.
2. Project management including consistent methodology and collection of quality data, budgeting, project personnel management, monitoring progress of projects to ensure attainment of objectives within prescribed work schedules, and administering grants and contracts.
3. Wetland ecology, botany and soil sampling methodologies.
4. Wetland floristic quality indices, water quality and soil parameters, and survey methodologies.
5. Wetland protection and restoration practices.
6. Landscape ecology, conservation biology, and ecosystem management principles and practices.
7. Adaptive management principles.
8. Statistics analytical software, word processing, spreadsheet, and communication software programs.
9. Techniques for effective communication, both written and oral.
10. Mastery of first aid techniques.

Physical Requirements and Environmental Factors:

Sedentary work (exerting up to 10-20 pounds of force occasionally and /or a negligible amount of force) for 50-74% of the time. Light to heavy work (exerting force from 20-100+pounds) accounts for less than 25%.

Physical Activity Requirements: The position requires bending at the waist, kneeling, crouching, crawling, climbing, balancing, lifting, carrying, pushing, pulling, reaching, handling,, sitting, standing, talking, hearing, seeing (clarity of vision at 20 feet or more and clarity of vision at 20 inches or less), walking on foot, Incumbent will have to handle sampling equipment in outdoor situations with changing weather patterns, and carry heavy field equipment into remote areas.

Physical Surroundings and Hazards: Environmentally, the position will spend approximately 10-50% of the time outdoors. Depending on the time of year, activities occur indoors and outdoors in varying amounts, meaning the incumbent could be exposed to extreme cold (temperatures below 32 degrees for periods of several work weeks or more), and possibly extreme heat (temperatures above 100 degrees for periods of more than one hour). There may be exposure to hazards such as bodily injury (proximity to mechanical parts, electrical current, and working in, on, and near the water.).

The position requires navigating through and working in very difficult terrain and the incumbent will likely encounter soft (non-supportive) water-logged sediment, standing water, floating mats, hummocks, slippery surfaces, thick detritus, dense shrub thickets, and thorny, stinging and poisonous vegetation, Physical hazards will also include working in and near dense clouds of mosquitoes and other stinging insects. Exposure to difficult and hazardous weather conditions will occur

Equipment Used

In the performance of their duties, incumbents typically use office equipment and water quality sampling equipment including: hand tools, power tools, GPS/navigation equipment, monitoring and sampling devices, and specialized scientific equipment such as lab equipment.